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Application No.: 09/656,677

Docket No.: 65229-0010/GP-301542

REMARKS

Claims 1-42 are pending. Claims 1, 10, 21, 25, 26, 28, 36, 40, and 41 are independent claims. In the Office Action, claims 1-42 are rejected under 35 U.S.C. § 102(e) as anticipated by, or, in the alternative, as obvious over, U.S. 6,253,115 ("Martin"). Applicants respectfully traverse these rejections. No claims are amended in this response.

Claims 1, 10, 25, and 28: "manufacturing system design"

Claims 1 and 10 each recite "reviewing a manufacturing system design according to design review data corresponding to a specification for the manufacturing system." Claim 25 recites "a design analysis tool that includes design analysis data documenting optimized practices for the manufacturing system with respect to at least one system concern." Claim 28 recites "reviewing a manufacturing system design according to safety design analysis data corresponding to a specification for the manufacturing system." The Examiner provides no explanation as to how Martin anticipates these limitations, stating only that "Martin positively discloses of having reviewing (IDENTIFY, MEASURE), conducting (DESIGN, ANALYZE), validating (CONTROL) as well as Optimizing for improvement before validating." (Office Action, page 2.) Moreover, nowhere does Martin teach or suggest reviewing a manufacturing system design, much less doing so according to design review data, as is required by Applicants' claims.

Martin discloses a software application and library of software tools for implementing a design of a six sigma process. (Martin, Abstract; 2:19-40.) The measure of a six sigma process is its sigma value, which indicates the degree to which the products of a process are free of defects. (Martin, 1:5-19.) Accordingly, Martin discloses a process that is "useful for improving the *process of designing a product or procedure.*" (Martin, 1:67-2:1; emphasis added.) However, Martin provides no teaching directed toward a *manufacturing system design* and in particular contains no teaching or suggestion of "design review data corresponding to a specification for the manufacturing system."

Applicants' Specification explains that the purpose of a design review is to evaluate and update the global specification for a manufacturing system. (Specification, 5:19 – 6:11.) In particular, the design review is concerned with "optimization issues with respect to one or more system concerns in a given piece of manufacturing equipment." (Specification, 6:10-11.) Further, the Specification explains that an advantage of Applicants' invention is that it

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"provides continuity between designers, suppliers and users during the manufacturing system design, procurement and implementation process." Thus, Applicants' claimed invention is directed toward improving a manufacturing system whereas Martin's disclosure is directed toward improving the quality of a product. Applicants' claims clearly reflect this difference in reciting, for example, "reviewing a manufacturing system design according to design review data corresponding to a specification for the manufacturing system."

Accordingly, Applicants' claims require reviewing a manufacturing system design rather than the product or process to which Martin attempts to make quality improvements. Applicants' Specification explains that:

Because the inventive process takes optimization issues with respect to one or more system concerns (e.g., safety, quality, reliability, etc.) into account during the design process, equipment designed according to the inventive method will require minimal, if any, retrofitting in the future to correct any issues that were not addressed in the original equipment design. (Specification, page 19, lines 18-23.)

Thus, Applicants' claims clearly require review of system design, rather than review of a system's operation after it has been implemented, and thus Applicants' claims provide the unique advantages that accrue from a review of a manufacturing system design. Martin does not teach or suggest analyzing a manufacturing system design based on the system's specification as is required by Applicants' claims, nor does Martin even hint at the advantages of doing so.

Further, the Examiner appears to concede that Martin does not teach the recited design review of data corresponding to a specification for a manufacturing system. The Examiner states that "[t]he presence [in] the claimed invention of designing and building a manufacturing system is well known as disclosed by Martin and [it] would have been obvious to one of ordinary skill in the art to modify [Martin] as required to improve quality, safety, efficiency and the same [time] reduce cost, and downtime." (Office Action, pages 2-3.) To the extent the Examiner has taken Official Notice of a teaching or suggestion to modify Martin to meet the limitation of "reviewing a manufacturing system design according to design review data corresponding to a specification for the manufacturing system," Applicants hereby seasonably challenge each instance of Official Notice taken by the Examiner in accordance with 37 CFR 1.104(d)(2) and MPEP §2144.03. Therefore, in

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response to this communication the Examiner is required to produce documentary proof with respect to the taking of Official Notice.

Accordingly, claims 1, 10, 25, and 28 are in condition for allowance at least for the foregoing reasons. Further, claims 2-9, 11-20, and 29-35 are in condition for allowance at least by reason of their dependence from claims 1, 10, and 28.

Claims 1, 10, 21, 26, 28, 36, and 41: "activity focused assessment"

Claim 1 recites "conducting an activity-focused assessment of the manufacturing system design". Claims 21, 26, and 41 each recite "an activity-focused assessment tool." Claim 28 recites "conducting an activity-focused risk assessment." Claim 36 recites "a task-based risk-assessment tool." The Examiner provides no explanation as to how Martin anticipates these limitations, stating only that "Martin positively discloses of having reviewing (IDENTIFY, MEASURE), conducting (DESIGN, ANALYZE), validating (CONTROL) as well as Optimizing for improvement before validating." (Office Action, page 2.) In fact, Martin contains absolutely no teaching or suggestion of any assessment of a manufacturing system design, much less the recited *activity-focused assessment* of a manufacturing system design.

With respect to exemplary claim 1, Applicants' specification makes clear that the recited activity-focused assessment "is a systematic way to evaluate all activities associated with a given manufacturing system, and their corresponding consequences as defined by the specific system concern (e.g., health/safety, quality, reliability, etc.) being optimized." (Specification, page 9, lines 2-4.) As noted above, Martin is directed to the six sigma process. (Martin, 1: 5-19.) Martin discloses meeting "critical to quality" parameters relating to the design of a product or procedure. (Martin, 1:66 – 2:1, 2:52-53, Fig. 1.) Applicants' claimed invention, in contrast, requires an activity focused assessment, i.e., an evaluation of each task involved in the operation and maintenance of a manufacturing system according to the risks and hazards associated with each task. (See Specification, page 9, lines 4-8.) Martin contains no teaching or suggestion of the six sigma process – or any other method – including the recited activity-focused assessment.

Therefore, claim 1 is in condition for allowance for at least the foregoing reasons, as are claims 2-9 depending therefrom. Claims 10, 21, 26, 28, 36, and 41 are similarly in

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condition for allowance, as are claims 11-20, 22-24, 27, 29-35, 37-39, and 42, respectively depending therefrom.

Claims 6, 21, 26 and 41: generating or selecting “an action for each activity/consequence pair”

Claim 6 recites “selecting an action for each activity/consequence pair.” Claim 10 recites “generating an action for each individual activity/consequence pair.” Claims 21 and 26 each recite an activity-focused assessment tool that “generates an optimized action corresponding to each individual activity/consequence pair.” Claim 41 recites an activity-focused assessment tool that “generates an action corresponding to each individual task/hazard pair.” The Examiner does not appear to address these claim limitations, nor do they appear to be disclosed in the prior art of record. (See Office Action, pages 2-3.) In particular, Martin nowhere teaches or suggests generating or selecting actions for activity/consequence, or task/hazard, pairs.

Applicants’ Specification explains the generation or selection of an action for activity/consequence, or task/hazard, pairs as follows:

After the consequences have been evaluated for each activity at step 220 by the team, the evaluation responses are entered into an activity-focused assessment software tool to generate a recommended action at step 222 for each activity/consequence pair. In the health/safety context, for example, the recommended action for each activity/consequence pair will fall into one of three categories: lockout, control reliable method, and other safety measures. (Specification, page 12, lines 9-14.)

Applicants’ claims require selecting or generating an action based on activity/consequence, or task/hazard, pairs. As is clear from the foregoing explanation, the selected or generated action is a recommended feature to be added to a manufacturing system design. Further, Applicants make clear that the selected or generated action does not necessarily impact the quality of the product being manufactured; rather, Applicants’ claims are directed toward improving the design of a manufacturing system. Martin, as noted above, is directed solely toward improving the quality of a product or process. Nowhere does Martin teach or suggest generating actions based on activity/consequence, or task/hazard, pairs.

Accordingly, claims 6, 21, 26, and 41, as well as claims 7-8, 22-24, 27, and 42, depending therefrom, are in condition for allowance for at least these reasons.

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Claims 28, 36, and 40: "safety design analysis"

Claim 28 recites "reviewing a manufacturing process according to safety design analysis data." Claims 36 and 40 recite "a safety design analysis tool that includes safety design analysis data." The Examiner does not appear to address these claim limitations, nor do they appear to be disclosed in the prior art of record. (*See Office Action, pages 2-3.*) In particular, Martin makes absolutely no teaching or suggestion regarding the safety of a manufacturing system.

As noted above, Martin is directed solely toward improving that quality of a product or process. Nowhere does Martin mention or even hint at issues of related to safety, health, etc., much less those issues as they arise in a manufacturing system. Further, one of ordinary skill in the art would have had absolutely no reason to construe Martin as providing any motivation to use safety design analysis data inasmuch as Martin is directed solely toward quality improvements. Accordingly, claims 28, 36, and 40 are in condition for allowance for at least these reasons, as are claims 29-35, 37-39, and 42, respectively depending therefrom.

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CONCLUSION

Applicants respectfully submit that all pending claims are distinguished over the cited prior art and are in condition for allowance. If the Examiner has any questions or issues relating to Applicants' response, he is encouraged to telephone the undersigned representative.

Any fees associated with the filing of this paper should be identified in an accompanying transmittal. However, if any additional fees are required in connection with the filing of this paper, permission is given to charge Deposit Account No. 18-0013, under order number 65229-0010. To the extent necessary, a further petition for extension of time under 37 C.F.R. § 1.136 is hereby made, the fee for which should be charged to the foregoing deposit account number.

Respectfully submitted,

Date: September 14, 2004

By:



Kristin L. Murphy, Reg. No. 41,212
Rader, Fishman & Grauer PLLC
39533 Woodward Avenue, Ste 140
Bloomfield Hills, MI 48304
Tel: (248) 594-0600

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